

**National School on Neutron and X-ray Scattering  
August 14-28, 2005**

**Building 223 Auditorium, Room B002  
Argonne National Laboratory  
Argonne, Illinois**

**Sunday, August 14**

**3:00 p.m. until 8:00 p.m. - An informal get together is scheduled in the Lodging Facility Exchange Club located in the lower level of Building 617. Food and beverages will be provided. All School participants and program presenters are invited to attend.**

## SCHEDULE FOR SCHOOL OPENING - Monday, August 15, 2005

Time/Date	Monday August 15
7:45 -	Bus to transport students from the 600 Area lodging facilities (be in front of the building) to Building 223
8:00 - 9:00	<b>Registration and Continental Breakfast</b> (Foyer of Building 223 Auditorium)
9:00	<b>Opening Remarks</b> Dr. Robert Rosner Laboratory Director Argonne National Laboratory  <b>Welcome</b> Dr. Harold W. Myron Director Division of Educational Programs Argonne National Laboratory  Dr. Raymond Osborn Physicist Materials Science Division Argonne National Laboratory  Dr. Dean R. Haeffner Group Leader/Physicist Experimental Facilities Division Advanced Photon Source Argonne National Laboratory
9:15 - 10:00	<b>Lecture</b> Interaction of X-rays and Neutrons with Matter  S. K. Sinha University of California, San Diego and Los Alamos National Laboratory  (1)

10:00 - 10:30	Break
10:30 - 11:30	<b>Lecture Continued</b> Interaction of X-rays and Neutrons with Matter  (1)
11:30 - 12:00	Group Photo
12:00 - 1:00	Lunch
1:00 - 2:00	<b>Lecture</b> X-ray Generation/Detectors  D. M. Mills Argonne National Laboratory  (2)
2:00 - 2:15	Break
2:15 - 3:15	<b>Lecture Continued</b> X-ray Generation/Detectors  (2)
3:15 - 3:30	Break
3:30 - 5:30	<b>Safety Training/Tour</b> IPNS Safety Training (Building 360, Room L119) IPNS Tour
6:00	Shopping Bus

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**Program - Week 1**

Time/Date	Tuesday August 16	Wednesday August 17	Thursday August 18	Friday August 19	Time/Date	Saturday August 20	Sunday August 21
8:30 - 9:30	<b>Lecture Continued</b> Interaction of X-rays and Neutrons with Matter S. K. Sinha University of California, San Diego and Los Alamos National Laboratory (1)	<b>Lecture</b> Neutron Generation/ Detection T. E. Mason Oak Ridge National Laboratory (4)	<b>Lecture</b> Small Angle Scattering G. G. Long Argonne National Laboratory (6)	<b>Lecture</b> Single Crystal Diffraction T. F. Koetzle Argonne and Brookhaven National Laboratories (8)	9:00 - 10:00	<b>Lecture</b> Inelastic Scattering B. D. Rainford University of Southampton (11)	<b>Free Time</b>
9:30 - 9:45	Break	Break	Break	Break	10:00 - 10:15	Break	
9:45 - 10:45	<b>Lecture Continued</b> Interaction of X-rays and Neutrons with Matter (1)	<b>Lecture Continued</b> Neutron Generation/ Detection (4)	<b>Lecture Continued</b> Small Angle Scattering (6)	<b>Lecture Continued</b> Single Crystal Diffraction (8)	10:15 - 11:15	<b>Lecture Continued</b> Inelastic Scattering (11)	
10:45 - 11:00	Break	Break	Break	Break	11:15 - 11:30	Break	
11:00 - 12:00	<b>Lecture</b> Neutron Instrumentation T. E. Mason Oak Ridge National Laboratory (3)	<b>Lecture</b> X-ray Instrumentation D. M. Mills Argonne National Laboratory (5)	<b>Lecture</b> EXAFS E. A. Stern University of Washington (7)	<b>Lecture</b> Nuclear Resonant Inelastic X-ray Scattering W. Sturhahn Argonne National Laboratory (9)	11:30 - 12:30	Lunch	
12:00 - 1:15	Lunch	Lunch	Lunch	Lunch	12:30 - 6:30	<b>Experiment 2B</b> See attached "Experiments Schedule"	
1:15 - 2:15	<b>Lecture Continued</b> Neutron Instrumentation (3)	<b>Lecture Continued</b> X-ray Instrumentation (5)	<b>Lecture Continued</b> EXAFS (7)	<b>Lecture</b> Coherent X-ray Scattering L. B. Lurio Northern Illinois University (10)			
2:15 - 2:45		Break	Break	Break			
2:15 - 5:30	Break  <b>Safety Training/Tour</b> APS Safety Training APS Tour CD Introduction						
2:45 - 9:30		<b>Experiment 1 Introduction</b>  <b>Experiment 1A</b> See attached "Experiments Schedule"	<b>Experiment 1B</b> See attached "Experiments Schedule"	<b>Experiment 2 Introduction</b>  <b>Experiment 2A</b> See attached "Experiments Schedule"	6:30	<b>Picnic</b> Building 603 area by swimming pool	

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**Program - Week 2**

Time/Date	Monday August 22	Tuesday August 23	Wednesday August 24	Thursday August 25	Friday August 26	Saturday August 27	Sunday August 28
8:30 - 9:30	<b>Lecture</b> Powder Diffraction J. J. Rhyne Los Alamos National Laboratory  (12)	<b>Lecture</b> Magnetic Scattering C. F. Majkrzak National Institutes of Standards and Technology  (14)	<b>Lecture</b> Stress/Strain D. W. Brown Los Alamos National Laboratory  (17)	<b>Lecture</b> Imaging S. R. Stock Northwestern University  (20)	<b>Lecture</b> Real/Reciprocal Space Complementarity J. M. Gibson Argonne National Laboratory  (21)	<b>9:00 a.m.</b>  <b>Student Presentations</b>	<b>School participants depart for home</b>
9:30 - 9:45	Break	Break	Break	Break	Break		
9:45 - 10:45	<b>Lecture Continued</b> Powder Diffraction  (12)	<b>Lecture Continued</b> Magnetic Scattering  (14)	<b>Lecture Continued</b> Stress/Strain  (17)	<b>Lecture Continued</b> Imaging  (20)	<b>Lecture Continued</b> Real/Reciprocal Space Complementarity  (21)		
10:45 - 11:00	Break	Break	Break	Break	Break		
11:00 - 12:00	<b>Lecture</b> Reflectivity C. F. Majkrzak National Institute of Standards and Technology  (13)	<b>Lecture</b> Neutron Sources J. J. Rhyne Los Alamos National Laboratory  (15)	<b>Lecture</b> Synchrotron Sources G. E. Ice Oak Ridge National Laboratory  (18)	<b>Early Lunch</b>          <b>12:30 - 5:30 p.m.</b> <b>Experiment 4B</b> See attached "Experiments Schedule"          <b>Reception/Banquet</b> <b>Argonne Guest House</b> <b>Building 460</b>  <i>6:00 p.m. - Reception</i> <i>6:30 p.m. - Dinner</i>	<b>Lecture</b> Inelastic X-ray Scattering E. D. Isaacs Argonne National Laboratory  (22)	<b>1:00 p.m.</b>  <b>School Closing Picnic</b> Building 603 area by swimming pool	
12:00 - 1:15	Lunch	Lunch	Lunch		Lunch		
1:15 - 2:15	<b>Lecture Continued</b> Reflectivity  (13)	<b>Lecture</b> Diffuse Scattering G. E. Ice Oak Ridge National Laboratory  (16)	<b>Lecture</b> Spin Echo R. Pynn Los Alamos National Laboratory  (19)		<b>Lecture</b> Nanoscience with X-rays and Neutrons E. D. Isaacs Argonne National Laboratory  (23)		
2:15 - 2:30	Break	Break	Break		<b>Preparation of Reports</b>		
2:30 - 9:30	<b>Experiment 3 Introduction</b>  <b>Experiment 3A</b> See attached "Experiments Schedule"	<b>Experiment 3B</b> See attached "Experiments Schedule"	<b>Experiment 4 Introduction</b>  <b>Experiment 4A</b> See attached "Experiments Schedule"				